

# Collider-Accelerator Department

## Energized Circuit Work Permit

### Permit for Working "On or Near" Energized Components

#### FOR SUB-RANGE C

**Current > 10ma and AC Voltage from 50V to 600V rms**

This permit is required to allow work on energized electrical systems in accordance with ES&H Standard 1.5.0. and C-A OPM 1.5. This permit applies to all personnel who work at the C-A Complex. Qualified Plant Engineering personnel may perform this work under Plant Engineering's Energized Circuit Work Permit system.

Location/Circuit: CA complex – Generic Permit

CA Group:

System Description:

Description of task: Verification of voltage being de-energized after applying LOTO

Testing or Diagnosing of 50 – 600 volt rms ac circuits

Voltages are measured to ground. No terminal to terminal voltage within the control zone may exceed 600 Vac

Justification:

Verification that equipment is de-energized after applying LOTO

Start Date and Time: **FEBRUARY 28, 2004**

Estimated Finish Date and Time: **FEBRUARY 28, 2005**

✓ Electrical massive ground, live terminals

✓ Mechanical conditions

✓ Environmental conditions

✓ Working space constraints

✓ Obstructions in area

✓ Other energized circuits/parts

Describe Hazards: (See ES&H Standard 1.5.0, Appendix III for guidance)

Electrical shock, Blast, Flash

High currents can create high temperatures, and melt wires and components.

**TWO MAN RULE APPLIES.**

#### Procedures of Task

Procedure: Refer to C-A-OPM-ATT 1.5.d

Warnings Specified: Follow NFPA 70E or local postings

Clearance Zones: Follow NFPA 70E or local postings

Personnel Protective Equipment: Follow NFPA 70E or Local Postings

Approval to proceed:

*Jon Sandberg*

Date: 3/22/04

(Signature of Department Chair/Division Head or Formal Designee)

**REQUIRED FOR CIRCUITS ABOVE 600 Vac OR 6000 Vdc TO GROUND:**

Independent Reviewer(s):  
(Signature)

Not applicable to this permit

## Collider-Accelerator Department

Authorized Employee	Life Number	Employee Signature (indicating employee understands procedure, hazards, and precautions)

Supervisor:

Date:

Supervisor acknowledges the above personnel are properly trained, knowledgeable, and experienced to work under this permit.

### PRECAUTIONS

- Be Alert
- Provide adequate illumination
- Remove conductive apparel
- Follow requirements of NFPA 70E for Approach Boundaries, Risk Assessment and PPE

Copies of completed form are to be sent to the Department ES&H Coordinator. The person doing the job must have a copy of this signed permit at the work area.

## **Safety Information for Verification Of De-Energization Of Circuits For Sub-range C**

1. Identify and locate:
  - Power sources and shutoff devices
  - Emergency telephones
2. Establish work area:
  - Notify affected personnel
  - Cordon off work area
  - Worker shall carry or post Permit
3. Remove conductive apparel
4. Review NFPA 70E or local postings for proper personal protective clothing
5. Wear safety glasses
6. Measurement technique:
  - Ground one terminal of tester
  - Measure to ground
  - Use one hand at a time
7. De-energize all sources and stored energy devices
8. Lock-out and Tag-out all sources of energy to be verified.
9. Use “WIGGY” or similar tester to verify
10. Stop work and report to supervisor in any warning conditions exist
11. STOP if terminal cannot be reached or is not in sight